TEXTOS PARA DISCUSSÃO

nº 306

Saving, Financial Markets and Economic Development: Theory and Lessons From Brazil

Rogério Studart

Universidade Federal do Rio de Janeiro
Instituto de Economia Industrial

Textos para Discussão

Saving, Financial Markets and Economic Development: Theory and Lessons From Brazil

Rogério Studart [1]

janeiro 1994

Instituto de Economia Industrial
U F R J

Diretor
Ricardo Tolipan
Coordenador de Ensino
José Antonio Ortega
Coordenador de Pesquisa
João Luis Maurity Sabóia
Gerente Administrativa
Sebastiana de Sousa Barros
Supervisão
Maria Lúcia Ferro
Projeto Gráfico
José Antonio de Oliveira
Editoração Eletrônica
Jorge Amaro
Impressão
Célio de Almeida Mentor e Ronei José Gomes

Ficha Catalográfica

STUDART. Rogério,

Saving, financial markets and economic development: Theory and lessons from Brazil/ Rogério Studart. -- Rio de Janeiro: UFRJ/ IEI, 1994.

41p. 21cm. -- (Textos para Discussão. IEI/UFRJ; nº 306)

Bibliografia: p. 34-37

1. Desenvolvimento Econômico. 2. Sistema financeiro. I. UFRJ. / Instituto de Economia Industrial. II. Título. III. Série

Universidade Federal do Rio de Janeiro
Instituto de Economia Industrial
Pálacio Universidade do Brasil
Av. Pasteur, 250 - Praia Vermelha
CEP 22290 - Rio de Janeiro - RJ
295 1447 e 541 8148 (fax)

Very simply, in market economies where freely moving prices allocate goods and services, money is not only a medium of exchange but also a means of political and social control: it is one way of deciding who gets what. Therefore, by following the money flows in the market economy and in the institutions that structure that flow we can learn a great deal about the uses to which society's resources are put, the people who make the allocative decisions, and the process through which control is obtained and exerted (Zysman, 1983: 7).

Saving, Finacnial Markets and Economic Development: Theory and Lessons From Brazil

1. Introduction

One common assumption in models of finance and economic development is that saving is a precondition to investment and economic growth - an assumption which we call hereafter the prior-saving' argument. The two-gap models, for instance, claim that external saving is required for development if both the investment-saving and the import-export gaps are to be overcome (e.g. Chenery and Strout, 1968). The prior-saving argument is also present in the financial liberalisation models (e.g. Shaw, 1973 and McKninnon, 1973).[2] These models maintain that internal saving/investment can be increased by stimulating savings with positive interest rates and increasing the competition between financial institutions through financial deregulation.

That prior-saving argument is a pre-Keynesian concept is recognised by many macro-economists. However few have explicitly acknowledged the full consequence to the analysis of finance and growth, let alone of finance and economic development of the reversal of causality (between finance and saving) proposed by Keynes (1936). In this paper, the Post Keynesian theory is used in search for an alternative approach on the role of banks, saving and financial markets in the process of development.

The paper is mainly concerned with the internal mechanisms to finance accumulation. Nevertheless, given the importance of the external debt problem in many less developed countries (LDCs), the role of foreign debt to development is also addressed. Finally, the Brazilian experience from 1947-83 is used to illustrate how such a Post Keynesian approach can be applied.

The paper is set out as follows. Section 2 discusses an alternative approach on finance and economic development based on the Post Keynesian theory. Section 3 presents the method of analysis which derives from the analysis in section 2. Section 4 briefly reviews the Brazilian case-study using the tools developed in section 2, and point to the lessons that can be learned. Section 5 summarises the findings and presents the conclusions.

2. A Post Keynesian view of the role of the financial system in economic development

Keynes's assumption that finance precedes saving has led to much controversy and misunderstanding. This view had already been challenged in a debate which involved Keynes, Ohlin, Robertson and Hicks. [3] In that debate, Ohlin and Robertson insisted in reinterpreting Keynes's liquidity preference theory within a neoclassical loanable funds framework. Ohlin (1937a,b) claimed that Keynes's ex-post equality between saving and investment was merely a truism that said nothing about the mechanism by which investment was financed. In contrast, Ohlin maintained that deposits precede loans, and hence saving precedes investment. Robertson (e.g. 1937a) shared Ohlin's view, and claimed furthermore that in the case of a rise in investment, the existing volume of saving would not suffice to finance the latter: an increase in the money supply would have to fill the "gap", and that would imply forced saving. If inflation is to be avoided, concluded Robertson, the deposit rates would have to rise in order to stimulate saving.

The controversy was never properly settled; modern Post Keynesians reopened it, in a now well-known debate started by Asimakopulos (1983) and followed by replies from, among others, Kregel (1984-5; 1986), Davidson (1986), Richardson (1986) and Terzi (1986). To clarify the matter, Keynes's view can be approached through a stocks and flows model, similar to the one used by Godley and Cripps (1985) for other purposes. This model - the finance-investment-saving (FIS) circuit - substitutes the neoclassical, static view of the process of investment finance.

In contrast to the neoclassical view, the FIS circuit integrates finance into the multiplier to show how saving is created as a by-product of the process of income creation. For this reason it has been used by many Post Keynesians to prove the precedence of investment over saving (e.g. Chick, 1983; Terzi, 1986; Amadeo and Franco, 1988; Carvalho, 1992; Richardson, 1986). But the FIS circuit has more to offer as an analytical tool: based on this circuit it is possible to develop a systemic view of the role of banks, saving and financial markets in the process of growth. This is the heart of the approach proposed in this article.

a. *A model of investment finance based on the FIS circuit*

Table 1 consolidates the balance-sheets of the principal agents - namely the banking system, the entrepreneurs and households - in a Keynesian fashion. Each column corresponds to a period (n) of the multiplier process, and is divided into two other columns, displaying the assets and liabilities of those agents; n=0 is the initial position, followed by 3 rounds of the sequential process; n=N gives the end-of-process values. All values in these balance-sheets are nominal, but prices are assumed to be unchanging. Finally, firms' inventories and households' stocks of durable consumption goods are not considered here. Financial assets are cash, deposits in commercial banks and securities. For simplicity, the following assumptions are made: (1) only households save; (2) uncertainty has no effect on anyone's current asset-holding behaviour: balances are either held for transactions or for (long-term) saving purposes; [4] this is similar to assuming that "the marginal propensity to buy placements out of household savings" (m) is equal to 1 (see Davidson, 1978: 272); (3) the propensity to consume is 0.7 and intended savings are held completely in the form of long term securities, which are issued by indebted firms in order to repay outstanding debts; and (4) there is a lag between the accumulation of active balances (for consumption purposes) and their expenditures, and between the issue of securities and the repayment of debt.

Table 1 - The financial side of the multiplier story: a numerical example

Period (n)	0		1		2		3		...	N	
Account	A	L	A	L	A	L	A	L	...	A	L
BANKS											
Reserves (1)	100		100		100		100		...	100	
Loans (2)	50		100		85		74.5		...	50	
Deposits (3)		150		200		185		174.5	...		150
FIRMS											
Deposits (4)	100		115		110.5		107.4		...	100	
Capital (5)		50		100		100		100	...		100
Loans (6)		50		100		85		74.5	...		50
Securities (7)	0		15		25.5		32.9		...	50	
Net Worth (8)	100		100		100		100	...		100	
HOUSEHOLDS											
Deposits (9)	50		85		74,5		67.2		...	50	
Securities (10)	0		15		25.5		32.9		...	50	
Wealth (11)		50		100		100		100	...		100
Total (12)	350	350	515	515	495.5	495.5	481.9	481.9	...	450	450
Y(*) (13)				50		85		109.5	...		166.7
Sd(*) (14)				15		25.5		32.9	...		50
R/D=(1)/(3) (15)	0.67		0.50		0.54		0.57	...	...	0.67	
L/NW=(6)/(8) (16)	0.5		1.0		0.8		0.7	...		0.5	

Y = Income; S^d = Intended Saving; (*) Accumulated Values; R/L = bank reserves over bank loans; L/NW = loans over net worth.

The model considers a simple income multiplier where investment generates a flow of income, consumption and saving. Suppose that an investment of 50 is entirely financed by bank loans, created as a book- keeping operation as described by Keynes (e.g. 1930: 209). This additional supply of bank-money will generate a sequential process of payments - wages and consumption - and, consequently, of transfers of deposits among agents. If we call "intended saving" the additional holding of securities generated alongside the multiplier process, then each period 0.3 of the previous additional income will be used to buy securities and, hence, to repay outstanding debt.

As Table 1 shows, if the reserves available to the banking system are unchanged, banks must reduce their liquidity in order to finance investment.[5] It must be stressed though, that, since deposits remain within the banking system, investment finance need not represent a drain of cash from the banking system.

In the process of financing investment, the corporate sector must also increase their financial vulnerability - here defined by the ratio between their loans and their net worth (L/NW). The macroeconomic reason for this result is that until the multiplier is complete part of the additional savings are not intended, but result from acceptance of deposits in the course of transactions.

Because at each period the whole of the additional intended saving is used to buy long term securities, at the end of the process aggregate intended saving will be asymptotically equal to investment (S^d=I=50).[6] And since firms use those funds to repay their short term debts, when the multiplier process following a one-shot investment is completed, bank loans will be reduced to their initial position (50).

b. *"Banks hold a key position in the transition from a lower to a higher scale of activity"*[7]

The above model assumes that bank loans are a causal variable in determining the level of investment. An applied economist may rightly challenge this assumption, since corporate finance statistics show a higher proportion of self-finance (retained profits) as a source of investment financing in most developed economies (e.g. Mayer, 1988). So why not assume that finance comes totally from retained profits or other sorts of previous saving?

The logic which underlies Keynes's claim that finance comes from banks rather than saving rests upon a view of finance as a sequential process similar to the one employed in the above model. If this view is taken to its logical limits, then only in a stationary state, and then only under the strict assumptions concerning the portfolio-choice of savers, can "previous saving" finance investment. This can be demonstrated by using

Robertson's (1937a: 171-5) suggestion about the role of saving in financing investment when investment is steady throughout time.

Robertson pointed out that, where investment is made at an equal and steady pace for a certain period of time, the sum of the additional "intended saving" equals the demand for investment finance at any point (1937a: 172). This view is illustrated by Table 2 below, where c stands for the propensity to consume; the rows represent the multiplier processes initiated by an investment (I) equal to 1, undertaken in each period; and the columns, the intended saving (S^d) created as a product of the multiplier process.

Table 2 - A Robertsonian view of overlapping multiplier processes

Period	1	2	3	4	...	N	N+1	S^d
1	(1-c)	c.(1-c)	c^2.(1-c)	c^3.(1-c)	...	c^N.(1-c)		≈1
2		(1-c)	c.(1-c)	c^2.(1-c)	...	c^{N-1}.(1-c)		≈1
3			(1-c)	c.(1-c)	...	c^{N-2}.(1-c)	c^{N-1}.(1-c)	<1
4				(1-c)	...	c^{N-3}.(1-c)	c^{N-2}.(1-c)	<1
N					...	(1-c)	c.(1-c)	<1
N+1						...	(1-c)	<1
S^d	<1	<1	<1	<1	...	≈1	≈1	

Notice that from n=N the aggregate demand for securities (S^d) equals the demand for investment finance (I). Thus, in a stationary state (from n=N onwards in Table 2), no additional creation of liquidity is necessary in order to finance accumulation: the investing firms may always finance their investment projects through the issue of securities. This result was accepted in Keynes's response to Robertson, that is, his view of finance as a revolving fund which "looks after a flow of investment [and] does not absorb or exhaust any resources" (1937a:209). However, as Keynes rightly pointed out elsewhere (1939: 209), the existence of a "revolving fund" of credit does not reduce, but consubstantiates, the causal importance of bank credit for the

process of growth. To demonstrate this simple if one assumes that the economy is growing and that this growth (g) is investment-led:

$$I_t = (1+g).\ I_{t-1}$$

Since the increase of investment only affects the additional income created immediately after it, then

$$I_t - m.S^d_t = g.\ I_{t-1} > 0$$

Therefore, only in the stationary state (g=0) can investment be totally financed by "prior saving", and then only if savers agree to hold all their intended saving in the form of long term securities (m=1). Yet any increase of investment above previous investment levels will generate a demand for money for finance motive that is not automatically provided (Keynes, 1939a: 209).[8]

Assume that banks do not accommodate an increase of the demand for finance. If the public's liquidity preference is unchanged, then either the rise of investment will be halted by the lack of funds, or investors will bid for funds in the money market, [9] which may cause an increase in the interest rate. [10] Since the interest rate is a main determinant of the level of investment, this rise may abort the process of growth.

To sum up, it is banks, and not savers, who hold a key position in the process of growth. Only if they share the optimism of entrepreneurs in periods of growth or are led, for any other reason, to accommodate the demand for investment finance, can the monetary production economy grow. This conclusion would appear to leave no role for saving, but such is far from being the case, as the following two sections will show.

c. *Growth and financial fragility*

Minsky's (e.g. 1982) financial fragility hypothesis describes the inherent tendency of investors and speculators to rapidly increase their level of indebtedness in moments of optimism. If such optimism is shared by lending institutions, they will

accommodate the demand for loans by reducing their margins of safety. The net result is an increase in the vulnerability of the network of financial commitments of the monetary economy. In turn, the viability of such network depends upon the ability of the borrowing units to honour their debts (see Minsky, 1982: 204).

The FIS model presented above corroborates Minsky's hypothesis: a growing market economy is inherently more fragile. First, borrowing from banks to finance investment increases short-term indebtedness. Firms' capacity to repay with their own cash-flows has to wait until their investment projects mature and their productive capacity expands. Therefore a bank-financed expansion leaves the corporate sector in more vulnerable financial position. Second, in increasing the supply of investment finance banks are reducing further their "margin of safety". In other words, both firms and banks are augmenting the vulnerability of their businesses and, potentially, their dependence on alternative sources of liquidity.

Financial fragility in itself is not a constraint to growth, but it may disrupt the process of expansion. This is especially true if an increase of fragility causes the debt-deflation, an expression of the exhaustion of financial arrangements which may lead to financial instability (Minsky, 1982; Fisher, 1933). Debt-deflation can be triggered by units attempting to sell their liquid assets in order to raise cash (indebted firms), to reestablish their liquidity positions (banking and other financial institutions), or to satisfy some bearish change of expectations (speculators). This run to regain liquidity affects real expenditures through its effects on interest rates, on the availability of funds to finance and fund investment and on long-term entrepreneurial expectations.

To sum up, the fact that banks can finance investment through book-keeping creation of money does not warrant a financially stable process of growth. Growth increases financial fragility, and financial instability can halt growth. Having said this, we are now in position to assess the role of saving and financial markets in the process of growth.

d. *The microeconomic and macroeconomic roles of saving and financial markets*

Even if, in Post Keynesian theory, individual savings and financial intermediation are secondary in the determination of the aggregate supply of investment finance, they do matter in a different context - the question of funding.

From the microeconomic perspective, entrepreneurs and bankers desire to fund their long term commitments on a stable basis because of the uncertainty about the prospective conditions of credit and levels of interest rates. Thus, the reason for funding can be interpreted as a response to a menacing increase in both borrower's and lender's risks (Keynes, 1936: 144). That is why, in a world of uncertainty, investment finance is characteristically a twofold process of finance and funding (Keynes, 1937b: 166).

Being the loci where funding takes place, financial markets have an important role in supporting growth. From a microeconomic perspective, they may increase the predisposition of firms and banks to engage in the financing of long-lived assets. Another interrelated microeconomic function is the provision of information for firms issuing securities, underwriters and demanders of securities. This informational role can be summarised as follows: (1) secondary markets signal the price of new issues of securities; (2) secondary markets make underwriting by specialised financial institutions a less risky business; [11] and (3) secondary markets enable investors to evaluate the prospective profitability of newly- issued securities by enhancing the flow of information (Bain, 1981: 61).

From a macroeconomic viewpoint, funding and, therefore, financial markets also bear a role which is seldom spelled out. That is, the role of mitigating the increasing financial fragility inherent in a growing monetary economy. This macroeconomic role will very much depend upon two interrelated characteristics of the financial markets: (1) their size; and (2) their stability. A thin financial market is unlike to be able to increase its levels of operation without significant shifts of asset prices; and a volatile financial market can provoke sudden shifts of the rate of interest

and, therefore, be more damaging than supportive of the process of growth.

Finally, it is worth remembering that not only thin markets are highly speculative and volatile, neither is speculation is short-term phenomenon which tends to disappear in the long run. Much to the contrary, the very existence of the secondary markets (where old securities are sold and bought) relies on continuous trading, which provides the liquidity that makes it less risky for wealth-owners to hold long-term securities. It is this provision of liquidity which makes long term bonds and securities attractive to savers - who, as Davidson (1982: 29) has rightly put it, are searching for safe "liquidity time-machines", and rarely wish to be "blocked in" to holding an asset for a long period of time.

To sum up, financial markets have an important, but yet ambiguous, role in supporting growth. They intermediate between the demanders of securities and those firms wishing to fund their short- term liabilities. But one cannot forget the negative side, that is, the instability brought by the speculative nature of these markets.

e. *Finance in open-economy macroeconomics: a note*

It has been indicated in the previous chapter that the distinction between finance and saving must also be applied to the analysis of the role of external debt in financing development - especially in these times, when multinational credit-creating institutions are a part of the world scenario. Another important distinction is, of course, that between finance and funding.

This distinction can be straightforwardly used in the analysis of the LDCs' debt problem. One of the main problems about the recent experience with LDCs' debt was that, even though the international banking system substantially increased their capacity to finance firms in developing countries, the institutional mechanisms to fund them were not available in the 1970s/ 1980s (any more than they are nowadays). The reasons for this are many, but one of them is that few companies in LDCs are large enough or well enough known internationally to be able to

float stocks and long-term securities in the international organised financial markets.

This lack of mechanisms to fund LDCs' firms may partly explain why in the 1970s, when there was a significant increase of international bank loans to LDCs, banks preferred to lend with floating interest rates (or at short maturities) and the guarantee of LDCs' national governments was commonly required for such operations. The short term maturities of the rapidly increasing loans to LDCs almost immediately put LDCs and the international banking system into a more fragile position. For even if such a debt had been used to finance expansions of the productive capacity to export (which was not, incidentally, always the case), LDCs could not repay their debt before such capacity was put to use. Indeed it only took a rise of interest rates, caused by the monetary policies of the developed countries in the end of the 1970s, to turn the financial fragility of the LDCs' position into the Debt Crisis of the 1980s.

3. From theory to analysis: applying the Post Keynesian approach

The measure of efficiency of the financial system in contemporary financial theory is based upon the "competitive capital market paradigm" (see Lewis, 1992). From a neoclassical perspective, in a competitive capital market saving/capital is allocated optimally; hence inefficiency is related to anything outside that paradigm: real-life institutional arrangements are implicitly seen as "distortions" in relation to the optimal outcome of the idealized structure. The role of analysis is thus to point to the imperfections of such structures and, perhaps, to the ways of reestablishing the sovereignty of the market forces (e.g. financial liberalisation).

From a Post Keynesian perspective, financial systems are more than intermediaries between saving and investment: they create saving (through finance) as much as they allocate of saving (funding). Both roles are equally important in an entrepreneur economy: finance creates the means of commanding resources that will permit entrepreneurs to implement their production and investment decisions; funding represents an

incentive for both banks and wealth-holders to hold securities and, additionally, reduces the financial fragility inherent to growing monetary economies. Since neither the availability of finance nor the existence of mechanisms for funding can be warranted by the simple forces of price- mechanisms, the meaning of efficiency here must forcibly have a different connotation in our analysis. In order to stress this difference, we will use another term: functionality.

Functionality has two distinctive dimensions: the first is the microeconomic dimension, the second, the macroeconomic. As regards the microeconomic dimension, functionality relates not to the static allocation of existing resources, but to the dynamic allocation of resources, which must encompass economies of scale. Since the under-employment of potential resources is characteristic of developing market economies, investment will not only increase the use of existing (and possibly idle) available productive resources, but will also create them. This is one of the main lesson we have learned from Keynes's General Theory (Keynes, 1936).

In the macroeconomic dimension, the functionality of the financial structure should be judged by how well it performs the functions of financing and funding; in other words, how it supports financially stable growth. Concerning these macroeconomic functions, it is important to stress that, from the perspective adopted here, there is no reason why appropriate mechanisms to finance and fund accumulation will spontaneously evolve in the process of economic development, especially when such development is rapid. Financial institutions (and especially banks) will, because of the liability structure, prefer to remain in the shorter end of financing if that is possible. In a fast-growing economy, with constant pressure on finance, the financial institutions can profitably grow simply by providing short-run finance to credit-thirsty enterprises. Neither private banks nor other financial institutions will have competitive stimulus to finance long term positions. In this case, in order to grow firms will have to recourse to renewable short term credit, self-funding or foreign indebtedness in order to implement their investment projects.

As regards funding, it is important to recognise that the development of stable financial markets may require a long-term strategy and nor simply short-term incentives to securities buyers. Thin financial markets - which are the rule in LDCs (Goldsmith, 1969; McKinnon, 1973; World Bank, 1989) - tend to be highly speculative and manipulated by few big "insiders", which create a comprehensive mistrust by most small savers and even some potential institutional investors (e.g. pension funds). Therefore, such development must be carried out with careful regulation by the authorities. This regulation can be loosened according to the development of such markets, but it is unlikely that complete deregulation will ever be compatible with financially stable growth.

Finally, it is important to remember that in countries where financial markets did not develop sufficiently to support financially stable growth, compensating structures are normally found - such as, for example, a strong commitment on the part of private banks (e.g. the German universal banks), the development of financial/corporate conglomerate (e.g. the Japanese financial/corporate conglomerates) or close government intervention such as the creation of development banks and the use of regulated selective credit mechanism (e.g. the South Korean case).

The functionality of the indigenous financial systems cannot be assessed, nor policy proposed, without a close examination of the existing institutions and their role in the financing of accumulation. It is thus naive to assume that institutional arrangements outside the capital-market based paradigm are less efficient; [12] or to expect that financial liberalisation, including positive real rates of interest, in itself will suffice to solve the problem of the lack of long term finance. In fact, our analysis point out that, in credit-based financial system, ceilings on interest rates may be rational mechanisms to avoid financial instability. [13]

Having defined functionality in the context of a developing economy, we are now in position to analyse the Brazilian case-study in the light of our Post Keynesian approach.

4. Lessons from Brazil: 1947-1983 [14]

This section analyses the financial reform undertaken from 1964 to 1966 in Brazil and its consequences to the subsequent evolution of the financial system and to the economic development of the country. The relevance of the Brazilian experience lies on the fact that the reform, at least as regards the provisions for the development of mechanism to finance long term investment, was guided by what was previously coined the "prior-saving" argument. In a nutshell, the reform attempted to enhance the country's saving capacity and to create mechanisms to increase the absorption of external saving. This was done by a mixture of institutional reforms (creation of investment banks and incentives to acquisition of shares), indexation of financial assets and other measures which were viewed as stimuli to saving.

This section claims that the misleading theoretical foundations of such reform created a financial system which was even less functional to Brazil's economic development than the one which existed before the reform. In addition, it is claimed that much of the financial chaos which the country increasingly had to face in the 1980s - that is, internal and external debt, severe financial instability and highly speculative character of the financial system - can be blamed on the 1964-65 financial reform.

a. *A brief review of the period before the reform*

The period from 1947 to 1961 in Brazil's development is characterised by an intensive process of import-substituting industrialisation. It is in this period that substantial part of the industries producing consumption goods were installed. Furthermore, and especially under the Target Plan (1956-60), the country saw a rapid development of its industries producing durable consumption goods and of infrastructure. [15] As one would expect, in a country which was essentially still agricultural in the 1940s, such development required rapid accumulation of capital. Indeed, from 1947 to 1961 investment was in average 15.4% of GNP, and in the period of the Target Plan (1956-60)

17.5%. This investment-led boom made it possible for the economy's GNP to grow in average 7.0%, whereas industry grew 8.7% yearly.

This rapid development of the productive sectors was not matched by the financial development. Until the 1960s the Brazilian financial system was dominated by the banking system, and the latter by the government's bank, the Banco do Brasil. The financial markets were underdeveloped and dominated by operations which were not related to the financing of productive investment. Credit was mainly short-term (30 to 90 days), and was provided to firms mainly by Banco do Brasil and other commercial banks. As regards longer term credit, Banco do Brasil shared the responsibility of financing investment with the Treasury and the National Development Bank (BNDE); [16] and, the savings banks (caixas economicas), again publicly owned financial institution, specialised in the financing of housing construction.

The lag between financial and economic development did not represent a barrier to economic development until the 1960s. The financing of growth was highly inflationary, but as long as the production of wage-goods kept pace with the expansion of nominal income the scheme was still workable: firms could still finance their expansion through profit inflation and the government could still finance its deficits through the expansion of the monetary basis.

In the 1960s, though, such an institutional gap began to represent a real constraint on growth. The previous period of rapid growth (1956- 61) was based on the over-expansion of sectors producing durable consumption goods. However, the poor income distribution made the market for durable consumption goods very thin, and its expansion dependent on the availability of medium-term consumer credit, which did not exist. This meant that, once the major investment projects of the Targets Plan mature (in 1960), the country faced a severe recession, a situation which was aggravated by a rise of inflation, financial instability and political upheaval. The government elected in 1961 attempted to revert the state of the economy by imposing a tight monetary policy and restrictive fiscal policy.

Nevertheless, the increasingly deteriorating economic and political situation ended in the 1964 coup, which brought the military to power.

As other cases in Latin America, the military coup provided some neoclassical economists with the opportunity to put into practice their orthodox ideas. One of the such ideas was the stabilisation programme - a mixture of tight fiscal, monetary and (especially) wage policies - which provoked in 1965 a decline of 4.7% in industrial production and of 2.5% of per capita GNP. One other such idea was the financial reform, which is analysed below.

b. *The "discipline of the market": the liberal rationale of the reforms of 1964-66*

The new administration explicitly blamed inflation for most of the evils of the previous period of development in Brazil. These evils included the "subversion of order and social hierarchy", the disorganisation of the credit and capital markets, the distortions in the exchange market, the allocative distortions caused by "illusory profits", the lack of stimulus to invest in basic sectors and residential construction, and speculation (see MiniPlan, 1964; 30-34). The predominant opinion within the government was that the "discipline of the market" should be imposed so as to correct these shortcomings in Brazil's development.[17]

The stabilisation programme of 1964-66 - comprising fiscal, monetary and wage policies - was already a step towards the discipline of the market'. Concerning fiscal policy, the budget would have to be balanced and the traditional inflationary financing of public deficits had to be suppressed by introducing mechanisms to finance it through public debt. This was the main goal of the 1965 emergency fiscal reform, which raised the tariffs of the public sector and introduced an indexed bond, the Readjustable National Treasury Bond (ORTN). Further, in 1966, a definitive fiscal reform was introduced.

The Banking Reform had the objective of providing the government with tighter control over the money supply. Law 4.595 of 1964 abolished the Superintendency of Money and

Credit and created the National Monetary Council (CMN), with the task of setting monetary, credit and exchange policies. It also created a central bank which was supposed to execute the policies determined by the CMN as well as to incorporate the function of bankers' bank and lender of last resort - until then assumed by Banco do Brasil. Finally, Banco do Brasil was expected to give up its function as the monetary authority, but to remain the government's financial agent and a commercial bank.

The logic behind the new wage policy was exactly the opposite of the logic applied to the reform of the financial market: whereas in the latter market inefficiency had been caused by excessive regulation (e.g. usury law, gold clause and the unfair competition of official banks) in the labour market inefficiency was caused by the excessive populism of the previous government, which allowed wages to rise beyond the increase of labour productivity. Therefore, the new wage policy redefined the method of readjusting wages (the minimum wage, wages of public servants and of workers in the private sector), which became pegged to an official index. Since, as noted in the previous chapter, this index was repeatedly below inflation, this procedure significantly compressed the real wage in a short period of time.

The strategy also involved the reforms of the housing and of the capital markets. With regard to the housing market, the reformers alleged that the two main factors which constrained its development were negative real interest rates and the ceiling on rents. The former, caused by the ceiling on interest rates, discouraged long- term saving. In turn, the latter dissuaded wealth-owners from investing in the construction of new residences. The consequence of this double repression, the argument continued, was a broad excess demand for housing - or the "housing deficit" as official documents used to call it. Accordingly the solution to the problem was three-fold: to introduce a new tenancy law which allowed the inclusion of a indexation clause in tenancy agreements; to stimulate long-term saving by indexing housing bills and to promote their transfer to finance construction; and to create institutions

specialising in mortgage financing.

The Capital Market Law was the star of the reforms proposed by the government. It was alleged that the market for long-term funds did not develop in Brazil due to the lack of stimulus to save. This was caused by three interrelated factors, two of which have already been noted: creeping inflation, interest rate ceilings and the inefficiency of the existing financial institutions and markets. According to many official documents, there was no scarcity of savings, but these were not channelled into investment because of the factors mentioned above.

Finally, the reformers blamed the excessive regulation of profits remittance and the discriminatory exchange policy for the limited use of foreign saving. This was then to be stimulated by a consistent exchange policy pegging the cruzeiro to the dollar, by a more liberal policy towards foreign capital and by introducing new institutional mechanisms for indigenous firms to borrow abroad. [18] There already existed a mechanism (Law 4131 of 24 October 1962) which permitted the contracting of loans in foreign currency with a minimum maturity of six months. To this, the following legal instruments were added by the reforms: SUMOC's Instruction 289 of 24 January 1965, which permitted the contracting of loans in foreign currency directly between firms abroad and in the country; Resolution 63 of 21 August 1964 and 64 of 23 August 1967 which permitted the contracting of loans in foreign currency by commercial banks, investment banks and BNDE. These loans could be split into cruzeiro loans of shorter maturity, to finance investment and working capital for national industrial and commercial firms.

To sum up, the financial reform was guided by the view which earlier in this thesis we called the prior-saving argument. That is, the ultimate source of finance is saving, which has to be stimulated by the provision of positive interest rates to savers, and channelled to productive investment through specialised financial intermediaries. The main obstacles to achieving this goal, it was believed, were inflation, financial repression and inefficient (non-competitive) financial institutions. The solution was then to stabilise prices, to dismantle the mechanisms of

repression (through indexation) and to stimulate competition between private financial intermediaries. Further, competition was to be enhanced by privatising the credit market (or by reducing the competitive advantage of Banco do Brasil) and opening access for national firms to foreign saving.

c. *The shortcomings of the reformed financial system*

Perhaps one of the most important achievements of the financial reform was the demand-led boom of 1967-73. Consumer credit, funded by the issues of bills of exchange by the finance corporations, permitted the 1967-73 boom in consumption of durable goods, which the newly installed consumer good sector awaited since the beginning of the recession in 1962. The new housing finance system provided further stimulus to the rapid growth of effective demand by financing residential construction (especially for the inner-cities and middle and upper classes). Together with a looser monetary policy begun in 1967, these factors permitted GNP to grow in average 11.2% a year and industry, 8.5%. These were the highest growth rates ever achieved in the country and crowned Delfim Netto, the finance minister in charge, with the title of the champion of the economic "miracle".

After this short period of consumption-led boom, however, the economy began to show signs of exhaustion of productive capacity. This meant that if growth was to continue, immediate increases of investment were required. From 1970 investment began to rise rapidly, but even such an increase was not enough to overcome the "bottlenecks" caused by the import-substitution of the 1950s. Now more than ever, the need to develop the basic-inputs and capital-goods sectors became evident (see Batista, 1986). Already in 1967-73 investment was in average 20.4% of GNP and from 1974 (when the II National Development Plan was launched) to 1980 it rose to 23.6% of GNP. The period 1974-80 was then to be a period of rapid accumulation.

This was when the shortcomings of the reformed financial structure emerged at full strength. These can be summarised as follows: (1) the maturities of both assets and loans continued to

be very short; (2) the existence of indexed and non-indexed liquid assets provided a fertile ground for speculation, which was unfavourable to the development of long term securities markets; and (3) external debt grew at a faster pace than the needs to finance the transfer of real resources from above increased; and finally (4) financial fragility increased. Each of these topics will be treated below.

d. *Finance and the rate of interest after the reform*

Indexation had two basic purposes in the 1964-65 reform: first, to stimulate saving with positive interest rates; second, to allow banks and other financial institutions to stretch the maturities of their loans. Indeed after the reform, interest rates increased became positive, whereas the diversification of financial assets increased significantly. As regards the holding of assets, from 1967 to 1973 time deposits increased in average 45.3% a year; passbook-savings deposits 7.4%; ORTN 17.1%; and all other assets had yearly growth rates which were higher than 9.0%.

However, there is a long distance from an increase of financial asset-holding and an effective increase of the funds available to investment. From the asset-side of the financial system, there was no substantial change in the maturities of loans and applications: they continued to be very short-term. Loan term loans continued to be provided exclusively by public financial institutions (e.g. Banco do Brasil, BNH and BNDE). The private sector only lent long term those funds transferred to them by the Treasury, BNDE and BNH as part of the special programmes.

The reason for the failure to develop a private long term financing financial system has to do with the risks that indexation brought to both lenders and borrowers. From the lenders' standpoint, indexation increased risk because its loans are normally of higher maturities than its assets; hence any (upward) change of inflation might cause losses. The borrower's risk also increased with indexation because its financial costs were now linked to inflation, whereas its revenues could not be totally indexed. Therefore, from the start the private financial system

showed an unsurmountable resistance to adopt indexation. This, in turn, resulted in a system where, on the one side, the public financial system issued medium and short-term indexed assets and lent with indexed, frequently subsided rates; and, on the other side, the private financial sector issued short-term assets bearing nominal rates; and lent short term, also charging nominal rates.

As regards the maturities of assets and loans, the wealth-owners also resisted to hold long term indexed assets. The fact is that the availability of short term assets bearing high nominal rates made the long term indexed assets poor competitors. This caused a reduction of the maturities of the assets of the financial system - including of government bonds. [19] As the average maturity of the assets of the financial system shrank, the maturity of loans also reduced (Almeida, 1984).

The behaviour of the banking system also changed substantially with the financial reform. This reform permitted the development of financial institutions specialising in the financing of durable consumption goods and housing. But it also permitted the system to profit from speculative uses of its funds, especially with government bonds. The deliberate policy of government to let banks hold reserves (even their voluntary reserves) in the form of public bonds, not only restricted the scope of monetary policy but also made speculation an alternative means of expansion of the banking system. [20]

e. *Financial markets, speculation and instability*

The financial reform of 1964-5 correctly perceived the need to develop a private long term capital market. But implicit laissez-faire assumption that the creation of institutions such as investment banks and the rise of interest rates would suffice to stimulate such development was misleading. The introduction of indexed government bonds raised the floor of the nominal asset rates offered to asset holders and the financial costs to firms. However, this did not lengthen the maturity of loans to the productive sector. Moreover, the spread of marketable short term securities stimulated speculation on which both wealth-

holders and financial institutions engaged in. As regards the interest rates, the rise of deposit rates caused an expected rise in loan rates.

Furthermore, government's attempts in 1964-5 to develop a private long term financial market, based on investment banks and fiscal incentives to acquire shares, was a significant failure. Investment banks never fully acted as suppliers of long term funds or represented an important stimulus to the development of long term securities markets. In effect, in 1971 the feeble stock market suffered a crash from which it never fully recovered until the 1980s.

To sum up, the failure to develop a private capital market and the rise of speculation created a financial system which was more short-term and speculative than the underdeveloped system of 1947-61: in other words, the reformed system was less functional to development. As a result, when accumulation be resumed in 1974-78, ad hoc measures had to be taken to finance accumulation. These measures included the rapid increase of BNDE's and BNH's long term loans. Another effect of the financial reform was the increased use of foreign indebtedness. To this we turn next.

f. *The external debt and the internal financial system*

In the period from 1947 to 1961, there was indeed a constant need to finance an increasing trade deficit created by foreign finance of rapid internal accumulation. Since most private national enterprises (including the public firms) did not have access to credit from the international financial system, the financing of the mentioned deficit involved three main mechanisms: (1) direct foreign investment; (2) the transfer of purchasing power in foreign currency from the surplus export sector to the investing national (public and private) firms, which was done basically by government selective exchange rate mechanisms and other likely selective measures; and (3) borrowing with government's help.

The financial reform of 1964-5 widened the access to the international financial system for both public and private enterprises. It dismantled the previous controls on loan capital

inflows and left a significant part of their allocation to the markets. Furthermore, by reducing the flow of investment funds to public enterprises, the government's financial policy stimulated those firms to borrow directly from abroad (Pereira, 1974).

The trajectory of the external debt in Brazil between 1967-73 shows that most of the debt was mainly caused by purely financial factors, rather then the need to finance real resources transfers. The consequence was an unnecessary increase of debt, which in 1973 represented 15.8% of GNP and 202.8% of Brazil's exports. Once the stock of debt increased (from US$ 3.8 billion in 1964 to US$ 12.6 in 1973), the cost of refinancing such debt began to represent, in itself, a major part of the internal demand for foreign currency. [21]

From 1974, the oil shock greatly added to the external debt problem because of the need to finance the increasing real resources transfers (RRT): the average of RRT/GNP rose from 4.35% of GNP in 1967-73 to 11.21 in 1974-80. However, the country's capacity to adapt to the crisis, and, despite the internal process of real accumulation, the RRT decreased rapidly until 1977. From 1977, again the country began to borrow above what was required to finance the real resources transfer. From then on an increasing part of the debt was to be caused by the need to refinance the outstanding stock of debt. In order to obtain the required foreign currency, the government kept a very tight monetary policy and liberalised interest rates. In addition to the high internal rates, the government acknowledgedly forced public enterprises to borrow abroad much above their finance requirements (see Trebat, 1983). The cost of such a strategy was to increase the financial vulnerability of the country, and especially of the government and of public enterprises, to the credit conditions in the international market.

Finally, with the change of monetary policy in the United States in 1979 and the sharp rise in interest rates, the rolling-over of the external debt became infeasible and the debt crisis dragged the country into the stagflation of the 1980s, the so-called lost decade.

g. *Financial robustness*

In credit-based financial markets, an increase in long term commitments will be followed by rising levels of indebtedness between firms. This leads to a higher level of general financial fragility, expressed by higher leverage ratios of banks and non-financial enterprises.

In 1947-61 this fragility was mitigated by the fact that firms used profit inflation as a means of funding their investment. However, as inflation rose and with aggregate demand decelerated after 1962, this mechanism became dysfunctional. Intervention by the monetary authorities rose but could not avoid the increase of bankruptcies in the productive sector and the collapse of financial institutions and the "curb" market for bills of exchange.

The financial reform did not reduce this tendency to fragility. The level of indebtedness of the corporate sector continued to rise with growth, and hence the economy's financial stability. However, now the interest rates had increased significantly and followed inflation closely. This meant that the mechanisms of rising profits in order to fund investment became less flexible and more inflationary than in 1947-61.

This explains why once aggregate demand started decreasing in the 1980s, the financial assistance of the central bank to financial institutions and firms rose (see Almeida, 1984). Also, the firms surviving from the bankruptcies of the beginning of the 1980s had to go through an intensive process of financial restructuring. This was made possible by significant transfers of government funds to the financial system and, indirectly, by the private sector's capital gains from dealing in government bonds (see Almeida, 1987).

h. *Government's financial trap and the economic crisis in the 1980s until today*

The whole of 1980s witnessed the fast reversal of the position of the private sector (from lender to borrower) and the worsening of the financial chaos which increasingly paralysed the Government. The fast increase of government's debt has created

at least two everlasting problems which need to be theoretically elaborated.

First, in market economies one of the "bright sides" of recession is related to the fact that the level of indebtedness is quickly reduced, so that investment can be once again be externally financed when growth is resumed. This reduction, which is due to debt-deflation or to bankruptcies of the most indebted firms, does not necessarily apply to government's debt, since governments cannot (normally) become bankrupt. The lack of spontaneous mechanisms to destroy government's debt and the need to impose adjustment programmes resulted in a fast increase of both the debt itself and the financial costs of servicing this debt. This "rising mountain of debt" becomes a more evident political target, and the thesis that all economic evils afflicting the economy are due to the Government's size begins to receive support from wider sectors outside and within Government itself. Finally given the "rigidity" of the Government's financial commitments, the only possible way to adjust is by reducing drastically the fiscal expenditures.

Now, in any market economy the reduction of autonomous expenditures are likely to reduce the level of output and employment. In Brazil, the consequences of reducing Government's expenditure go beyond even the simple multiplier effect: because the State, since the 1950s has taken the lead in determining the process of economic development, the private sector's investment decisions have become closely related to the public investments. [22]

Hence, the State's fiscal paralysis halted the process of economic growth - or at least reduced it to levels which were much lower the long term growth average (i.e. 7% yearly). Thus, the first years of the 1980s mark the beginning of a period of stagnation from which the economy, despite its incredible performance as exporter from 1984 onwards, never fully recovered until now.

As regards the financial system, except for the exceptional periods (such as during the Cruzado Plan in 1986), it has shown an enormous capacity to grow simply by exploiting the expansion of the financial circulation. Its gigantic profits have been also

been rising, but its functionality (as defined above) has no doubt been severely reduced: rather than growing through the support of real accumulation, its growth is justified by the increasing profits obtained in the financial circulation. In order words, Brazil's financial development in the 1980s has been much more a question of "financial accumulation deepening" than of true enhancement of the role of the financial system in supporting economic development.

5. Conclusion

This paper has presented a Post Keynesian approach on finance and economic development. The argument centres on the concept of functionality, which redefines the concept of efficiency of the financial system as regards the process of development. A financial system is functional to the process of economic development when it optimises the use of existing resources in the process of economic development with the minimum possible increase in financial fragility and other imbalances that may halt the process of growth for purely financial reasons.

There are several ways that such functionality can be achieved. For instance, Keynes's finance-funding process is based on the existence of a developed banking system and organised financial markets. However, history shows that many other forms of organising the financial system can enhance the functionality of credit-based financial systems. For that compensating structures or a consistent financial policy or, preferably, both must exist.

Most LDCs have very underdeveloped bank-dominated financial structure. There are theoretical reasons why it is desirable to develop financial markets: they provide the mechanisms to fund investment and therefore mitigate the increasing financial fragility which accompanies growth. But the limitations of a rapid development of such markets be respected if financial stability is also a policy goal.

Brazil's development history is not an exception to the case

mentioned in the previous paragraph: its industrialisation after the II Great War by far outpaced its financial development. This was less related to the "lack of stimulus to savers" but to the inherent difficulty of developing a long-term securities market in an environment of persistent inflation and at the pace imposed by the transformations in the productive sector. Given that the private financial sector could very profitably grow by simply specialising in the less risky short-term liability-asset management, it was very unlikely that a capital-market based financial system would emerge spontaneously.

The Brazilian financial reform was used as an illustration of how a reform, based on the misleading prior-saving argument and attempting to rapidly develop a private capital markets at all costs, can be very destabilising in what concerns the long term prospects of growth.

Three aspects of such reform have been discussed in this paper. First, in order to raise interest rates, government introduced indexed bonds and other government-backed indexed assets. The failure of government attempts to impose the same practice on private institutions, created a severely fragmented financial system, where indexed and non- indexed assets coexisted which increased the scope for speculation and the fragility of the system.

Second, the highly speculative financial markets and the persistence of inflation increased, rather than reduced, the risk-aversion of financial institutions and savers. So the private financial system continued to be dominated by the short term operations. The longe-term credit, such as the financing of industrial investment and civil construction was left to the State, respectively through its National Development Bank and its National Housing Bank.

Third, the reforms further opened the opportunities for firms to borrow abroad, allegedly in order to capture external saving. The reforms had failed to properly develop channels of long term finance for national firms. Hence such openness, associated with the exceptional conditions in the international financial markets in the 1970s, provoked a boost of foreign borrowing, far above the finance requirements of the economy, especially in the

period 1967-73. After 1974, government continued with the growth-cum-debt strategy, this time explicitly stimulating public enterprises to borrow in order to finance the their investment projects associated with the Second National Development Plan (1974-78).

The inadequacy of financial system that emerged after 1964-5 reform and their consequences for the developments in the 1970s are overlooked by the existing literature in view of the intensity of the disequilibria caused the subsequent oil shocks and the interest shock. The importance of those shocks is not reduced in our analysis. But focus is placed on the constraints, imposed by the financial structure, in overcoming the challenges of the 1970s. This role is associated with the structural weakness of the system which was reinforced by the misleading approach followed by the 1964-66 financial reform.

The lessons from Brazil, when read from a Post Keynesian perspective, have some strong policy implications. Policy towards enhancing the functionality of the financial system to economic development should focus as much on an appropriate financial policy as on institutional development. As regards financial policy, it must be remembered that financial institutions (and especially banks) will, because of the liability structure, prefer to remain in the shorter end of financing if that is possible. In a fast-growing economy, with constant pressure on finance, the financial institutions can profitably grow simply by providing short-run finance to credit-thirsty enterprises. Neither private banks nor other financial institutions will have competitive stimulus to finance long term positions. In this case, in order to grow firms will have to recourse to renewable short term credit, self-funding or foreign indebtedness in order to implement their investment projects.

It is thus naive to expect that financial liberalisation, including positive real rates of interest, in itself will suffice to solve the problem of the lack of long term finance. In fact, our analysis point out that, in credit-based financial system, to raise interest rates in itself does not increase the efficiency of allocation of internal resources, but may, under certain circumstances, cause financial instability, halting the process of growth and

retarding the process of financial development.

In what concerns institutional development, it is important to recognise that this must be a long term policy. Thin financial markets, which are the rule in LDCs, tend to be highly speculative and manipulated by few big "insiders", which create a comprehensive mistrust by most small savers and even some potential institutional investors (e.g. pension funds). Therefore, such development must be carried out with careful regulation by the authorities. This regulation can be loosened according to the development of such markets, but it is unlikely that complete deregulation will ever be compatible with financially stable growth.

Finally, it is important to remember that in countries where financial markets did not develop sufficiently to support financially stable growth, compensating structures are normally found - such as, for example, a strong commitment on the part of private banks (e.g. the German universal banks), the development of financial/corporate conglomerate (e.g. the Japanese financial/corporate conglomerates) or close government intervention such as the creation of development banks and the use of regulated selective credit mechanism (e.g. the South Korean case). It seems that LDCs, and perhaps multilateral agencies (e.g. World Banks and IMF), have more to learn from these experiences than from the capital-market based Anglo-Saxon paradigm of an efficient financial structure.

REFERENCES

Almeida, J.S.G. 1984: As Reformas Financeiras de 1964-65: Objetivos, Rumos e Desvios. Discussion paper no. 59, FEA, Universidade Federal do Rio de Janeiro.

Almeida, J.S.G. 1987: O Ajuste Financeiro das Empresas Produtivas na Crise, Discussion Paper no. 81, Instituto de Economia Industrial, Universidade Federal do Rio de Janeiro, October.

Amadeo, E.J. and **Franco**, G.H.B. 1988: Finance, Poupança e Investimento: Nem Keynes, Nem Robertson. Pesquisa e Planejamento Econômico, 19(2), pp. 379-86.

Asimakopulos, A. 1983: Kalecki and Keynes on Finance, Investment and Saving. Cambridge Journal of Economics, 7, pp. 221-33.

Bain, A.D.1981: Economics of the Financial System. Martin Robertson.

Banco Central do Brasil, 1973: Setor Externo e Desenvolvimento da Economia (External Sector and the Development of [Brazil's] Economy). Bulletin, Special Annexo II, January.

Batista, J.C. 1986: Brazil's Second National Plan and its Growth-cum-Debt Strategy. Discussion Paper 93, IEI/UFRJ, Rio de Janeiro.

Calabi, A., G.D. **Reiss** and P.M. **Levy**. 1981: Geracao de Poupanças e Estrutura de Capital da Empresas no Brasil. Instituto de Pesquisas Econômicas, Universidade de Sao Paulo, Sao Paulo.

Carvalho, F.C. 1992: Mr. Keynes and the Post Keynesian: Principles of Macroeconomics for a Monetary Production Economy. Edward Elgar, Hants, England.

Chenery, H. B. and A. **Strout**, 1968: Foreign Assistance and Economic Development. The American Economic Review, 4(1) September, pp. 679-733.

Chick, V. 1983: Macroeconomics after Keynes. Oxford, Philip Allan.

Chick, V. 1984: Monetary Increases and their Consequences: Streams, Backwaters and Floods. In A. Ingham and A.M. Ulph (eds), Demand, Equilibrium and Trade: Essays in Honour

of Ivor F. Pearce, London: Macmillan. Reprinted in Money, Method and Keynes, pp. 167-179.

Christoffersen, L. E. 1968: Taxas de Juros e a Estrutura de um Sistema de Bancos Comerciais em Condiçoes Inflacionárias: O Caso do Brasil. Revista de Economia Brasileira, 23(2), July, pp. 5-34.

Davidson, P. 1978: Money and the Real World. London: Macmillan, 1972.

Davidson, P. 1986: Finance, Funding, Saving and Investment. Journal of Post Keynesian Economics, 9(1), pp. 101-110.

Dutt, A. 1991: Interest Rate Policies in LDCs: a Post Keynesian View, Journal of Post Keynesian Economics, 13(2), Winter 1990-91, pp. 211-231.

Fisher, I. 1933: The Debt-Deflation Theory of Great Depression. Econometrica, 1, October, pp. 337-57.

Godley, W.A.H. and **Cripps**, F. 1985: Macroeconomics. London: Fontana Paperbacks.

Goldsmith, R. W. 1969: Financial Structure and Development. New Haven: Yale University Press.

Goldsmith, R. W. 1986: Desenvolvimento Financeiro um Século de Inflacao. Sao Paulo: Ed. Harper & Row do Brasil.

Keynes, J.M. Collected Writings (CW). D.E. Moggridge and E. Johnson, eds. Macmillan for the Royal Economic Society.

Keynes, J.M. 1930: The Treatise on Money: The Pure Theory of Money. Reprinted in the CW, vol. V, 1971.

Keynes, J.M. 1936: The General Theory of Employment, Interest and Money. New York, Harcourt Brace and World, 1964.

Keynes, J.M. 1937a: Alternative Theories of the Rate of Interest, Economic Journal, June. Reprinted in the CW, vol. XIV, pp. 201-15, 1973.

Keynes, J.M. 1937b: The 'Ex-Ante' Theory of the Rate of Interest, Economic Journal, December. Reprinted in the CW, vol. XIV, pp. 215-23, 1973.

Keynes, J.M. 1938: Mr Keynes and Finance. Economic Journal, June. Reprinted in the CW, vol. XIV, pp. 229-34, 1973.

Keynes, J.M. 1939: The Process of Capital Formation. Economic Journal, September. Reprinted in the CW, vol. XIV, pp. 278-85, 1973.

Keynes, J.M. 1979: The General Theory and After: A Supplement. CW, vol. XXIX.

Kregel, J.A. 1984-5: Constraints on the Expansion of Output

and Employment: Real or Monetary ?. Journal of Post Keynesian Economics, 7(2), pp. 139-52.
Lewis, M. K. 1992: Modern banking in theory and practice. Revue Économique, 10 (2), pp. 203-225.
Lessa, C. 1982: Quinze Anos de Política Econômica. Sao Paulo: Brasiliense.
Mayer, C. 1988: New Issues in Corporate Finance. European Economic Review, 32, pp. 1167-1189.
McKinnon, R. I. 1973: Money and Capital in Economic Development. The Brookings Institution.
MiniPlan - Ministério do Planejamento e Coordenaçao Geral, 1965: Mercado Brasileiro de Capitais, Documentos EPEA, no. 2.
Minsky, H. P. 1982:The Financial-Instability Hypothesis: Capitalist Processes and the Behavior of the Economy. In **Kindleberger**, C.P. and J.P. **Laffargue** (eds) Financial Crises. Cambridge: Cambridge University Press.
Minsky, H. P. 1986: Stabilizing an Unstable Economy. New Haven and London: Yale University Press.
Ohlin, B. 1937a: Some Notes on the Stockholm Theory of Saving and Investment. Economic Journal March and June, pp. 53-69.
Ohlin, B. 1937b: Alternative Theories of the Rate of Interest: Rejoinder. Economic Journal, September.
Pereira, J.E.C. 1974: Financiamento Externo e Crescimento Econômico no Brasil: 1966/73. Rio de Janeiro: IPEA/INPES.
Robertson, D. H. 1937a: Some Notes on Keynes's General Theory of Employment. Economic Journal September, 41, pp. 395-411.
Robertson, D. H. 1937b: Theories of the Rate of Interest: Rejoinder. Economic Journal, September, pp. 428-36.
Shaw, E. S. 1973: Financial Deepening in Economic Development. New York: Oxford University Press.
Sochaczewski, A.C. 1980: Financial and Economic Development in Brazil, 1952-1968. Unpublished Ph.D. Thesis, London School of Economics, July.
Studart, G.G. 1992. "Investmentos Públicos e Privados no

Brasil: Análise Empírica da Relaçao de Curto e Longo Prazos durante o Periodo 1972-89". Anais do XX Encontro Nacional de Economia, Sao Paulo: ANPEC.
Studart, R. 1992. Investment Finance, Saving, Funding and Financial Systems in Economic Development: Theory and Lessons from the Brazilian Case. Ph.D. dissertation, University of London.
Studart, R. 1993. Financial Repression and Economic Development: Towards a Post-Keynesian Alternative". Review of Political Economy, 5(3), pp. 277-298.
Taylor, L. 1991: Income Distribution, Inflation, and Growth: Lectures on Structuralist Macroeconomic Theory. Cambridge, Mas.: MIT Press.
Terzi, A. 1986: The Independence of Finance from Saving: a Flow of Funds Interpretation. Journal of Post Keynesian Economics, 9(2), pp. 188-197.
Trebat, T.J. 1983: Brazil's State-Owned Enterprises. Cambridge: Cambridge University Press.
World Bank 1989: Financial Systems and Development. World Development Indicators, Annual Report.
Zysman, J. 1983: Governments, Markets, and Growth: Financial Systems and the Politics of Industrial Growth. London: Martin Robertson.

SUMMARY

This article presents a Post Keynesian approach to the role of banks, financial markets and saving in economic development. It builds on Keynes's conclusion that investment causally precedes saving, to demonstrate that banks, and not savers, have the key role in the process of investment finance and growth. Saving and financial markets are shown to have the role of funding investment - which may be crucial in preventing the financial fragility inherent in the process of growth from deteriorating into financial instability. Finally, the Brazilian case is used both to illustrate how the Post Keynesian approach to finance and economic development can be applied; and to base policies for financially stable long-term economic growth.

[1] From the Universidade Federal do Rio de Janeiro. This paper was developed out of my Ph.D. dissertation at University College London under the supervision of Professor Victoria Chick, who is warmly thanked. The usual caveats obviously apply.

[2] For a critical appraisal of the financial liberalisation models, see Studart (1993).

[3] See Keynes, 1936; 1937a,b; 1938; 1939; Robertson, 1937a,b; Ohlin, 1937a,b; and Hicks, 1937b.

[4] Uncertainty in portfolio choice decisions, which represents a crucial aspect of Keynes's theory, will be addressed later.

[5] Banks' liquidity can be measured by the difference between the turn-over of their assets in relation to the turn-over of their liabilities. However, assuming that all deposits are demand deposits, the reserve/deposit ratio (row 15 of Table 1) may be used as a measure of banks' liquidity.

[6] This should not be confused with the identity between saving and investment. At any point aggregate saving will correspond to the non-consumed income, which is held either in a definite form (securities) or in the form of additional transactions balances (deposits). On this see Chick (1984).

[7] Keynes (1979: 222).

[8] This is exactly what Table 2 shows: at any period before the stationary state is established (i.e. after period N), S^d is lower than investment ($S^d<1$).

[9] The other possibility is to borrow from the international banking system, even though this demand for finance may not be directly related to the acquisition of a capital good from abroad. In this case, the additional supply of finance will come from the central banks' conversion of the loans into national currency, which is exactly as if the monetary authority had decided to accommodate the additional demand for money by expanding the monetary base. This possibility will be analysed below in more detail.

[10] As Keynes pointed out: "The rate of prior saving only tells us how much of the current investment can find a permanent home beforehand without upsetting the liquidity position and the long-term rate of interest, and without time lag. Subject to these conditions, the increment of current investment over prior investment (or saving) can only be cared for permanently out of the increment of current saving; and the period during which current savings are kept liquid by their owners must be bridged by an increase in the revolving fund of 'finance', i.e., of liquid funds provided by the banking system or by dehoarding. It is the role of the credit system

to provide the liquid funds which are required first of all by the entrepreneur during the period before his actual expenditure, and then by the recipients of this expenditure during the period before they have decided how to employ it" (Keynes, 1939: 284-5; my emphasis).

[11] The underwriter bears the responsibility for the acquisition of the securities which are not absorbed by the market after the price offered reaches a pre-established minimum. So the institution must be prepared to take up shares if called upon to do so, and therefore it must have access to cash when this occurs. This access can be provided by credit lines with banks, but it may also be necessary to sell some of its assets. Since its assets are likely to be primarily securities, then secondary markets are obviously useful to provide the underwriter with cash when it is required.

[12] This terminology is due to Zysman (1983). He defines a capital market-based system as one where the capital market is developed and provides firms with a significant part of their long-term financial needs. In contrast, a credit- based system is one which the capital market is weak and firms depend heavily on credit for raising finance beyond retained earnings.

[13] This conclusion has been stressed by many neo-structuralist economists. See e.g Taylor (1991: 111-24) and Dutt (1991).

[14] All data mentioned hereafter in this section, unless otherwise stated, are from the statistical appendixes of chapters 7 to 9 of my Ph.D. dissertation (Studart, 1992).

[15] In the process of industrialisation which took place in the 1950s, there was an implicit "division of labour" between public sector, private foreign capital and the national private capital. Government invested heavily in the infrastructure, especially transport and energy; foreign firms invested mainly in consumer durable industry and capital goods industry; private national capital, the weakest leg of this "tripod" invested mainly in the intermediary goods sector. This "arrangement" was to characterise the industrial development of the country from then on. An thorough analysis of the period is found in Lessa (1982).

[16] The BNDE was created in 1952 to finance investment made by public enterprises, using public funds and other transfers for this purpose. Only in the 1970s did BNDE begin to finance national private companies as well.

[17] The following passage from an official document, which presents the government's stabilisation policy, gives the liberal tone which would guide the reforms: "The government action in the democratic political systems must be oriented towards the establishment of the conditions which warrant maximum efficiency to the functioning of the free-market economies. In this context, the economic planning will implement measures

that will create the order in which the market forces will function..." (MiniPlan, 1964: as quoted in Almeida, 1984: 5).

[18] For a extended description of the government's view on the question of the need of external saving and of the logic behind the policy implemented in the period from 1967 to 1973, see Banco Central do Brasil (1973: 11-39).

[19] In 1964, when ORTN were first issued, the average maturity of the stock of these assets in circulation was 59 months; in 1971, the same maturity was 20 months. See Brazil's Central Bank Report, 1973, p.184.

[20] In 1973 44% of the stock of ORTN was held by the banking system and BNH as reserve requirements at order of the central bank; further 41 % were held by commercial banks and other financial institutions as part of their asset portfolio; only 15% was held by the public. For detailed data see Brazil's Central Bank Report, 1973, p. 185.

[21] From 1967 to 1973 the participation of the real resources transfer on the total capital inflow was only 19%, whereas profit remittances and especially interest charges and debt amortisation absorbed 66% of total capital inflows. One of the most striking indication of the financial character of such indebtedness is the fact that increases of reserves absorbed 16% of the capital inflows.

[22] However, see G. Studart (1992).